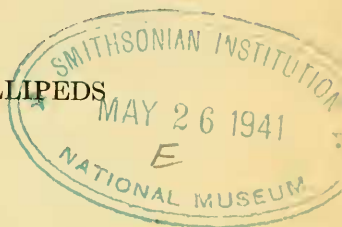


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

ON FIVE NEW POLYDESMID MILLIPEDS
FROM MEXICO.

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The new millipeds described in this paper are based upon material forming part of collections made by Harry Hoogstraal and Kenneth Knight in the states of Nuevo Leon and Michoacan during June and July, 1940. Types are in the author's collection.

Family RHACHODESMIDAE.

Pararachistes nuevus, new species.

Green throughout, including antennae and legs. Body with width nearly uniform over most of length. Keels of anterior segments wider than in *P. vertebratus* and conspicuously narrowing from base distad; moderately extended caudad of middle portion of segment, considerably less so than in *P. elevatus*; curved upward, more strongly so on posterior segments; posterior angles typical. Dorsal surface of metazonites smooth except for the usual transverse series of minute, nearly obsolete, tubercles. Repugnatorial pores looking upward, not outwards as described for *P. vertebratus*, minute denticle of anterior corner of keels barely detectable.

Genital process of second legs of male as shown in Fig. 1.

Apparently quite distinct from *P. elevatus*, the genotype, in the proportions and details of the male gonopods. The femoral division is notably larger in relation to the distal division, with the seminal cavity especially large and conspicuous. See further Fig. 2.

Length of male holotype, about 30 mm.; width, 3.2 mm.

Locality.—Mexico: Nuevo Leon: Sabinas Hidalgo, Ojo de Agua. Elevation, 1500 ft. Male holotype and female allotype taken by K. Knight under stones on escarpment, June 14, 1940. "Arid semi-desert scrub."

Family XYSTODESMIDAE.

Rhysodesmus brachus, new species.

Dorsum appearing cross-banded from the circumstance that the prozonites are paler and the metazonites darker brown. Keels yellowish, or yellowish brown, but no light band across caudal border of segments.

Cauda similar to keels. Antennae characteristically dark brown throughout, much darker than the head. Legs yellowish.

Collum much more attenuated over the lateral end portions than in, e. g., *leonensis*. Surface smooth, without trace of tubercles.

Body relatively broad. Dorsum rather strongly convex, the keels rising a little from the line continuing the dorsal slope. Metazonites free of all tubercles, smooth and shining. All keels from second caudad with posterior angles produced caudad, the production slight on anterior segments and becoming gradually more pronounced in going caudad. Pores on thickened lateral margin directed dorsad.

Sterna typical. Legs with joints and spines also as usual.

Gonopod of male as drawn (Fig. 3).

Length of male holotype, 35 mm.; width, 10.5 mm. Length of female allotype, 38 mm.; width, 10 mm.

Locality.—Mexico: Nuevo Leon: Sabinas Hidalgo, Ojo de Agua. Male holotype and two females taken by K. Knight on June 14, 1940, "under rocks on escarpment." Elevation, 1500 feet. "Arid semi-desert scrub."

Readily distinguishable from *R. leonensis*, found in the same locality, by its greater proportionate breadth, characteristic coloring, and details of gonopods.

***Rhysodesmus eusculptus*, new species.**

Color uniform brown over both prozonites and metazonites, the keels paler on lateral border. Head and antennae brown, the latter apically darker, the legs brownish yellow.

Antennae long and cylindrical.

Middle portion of anterior margin of collum weakly convex, the lateral portions evenly convex to the rounded end on each side; posterior margin arcuate, the middle part being widely incurved. Surface smooth except for a well developed series of 8-10 tubercles across posterior border and typically 4 well-separated tubercles across anterior border.

Body of but moderate relative width, the keels for the most part not overlapping. Keels not continuing evenly, the convexity of the dorsum, being a little more nearly horizontal. Anterior margin forming an even curve with the rounded anterior corner and the moderately convex lateral margin; posterior margin also convex; caudal corners not at all produced excepting on the posterior segments. Surface of metazonites with three transverse series of mostly distinct and moderately coarse tubercles, the first and second series more widely separated than the second and third.

Sterna with posterior margin widely but weakly notched.

Legs with ultimate article much longer than the penult; distal spine of second article conspicuous, none present on first article.

Gonopod of male as figured. (Fig. 4.)

Length of male holotype, 38 mm.; width, 7 mm. Length of female allotype, 37 mm.; width, 8 mm.

Locality.—Mexico: Tancitaro in State of Michoacan. Elevation, 6500 feet. Two males, of which one is freshly moulted, and two females taken by Hoogstraal, July 20, 1940, under rocks in moist woods.

Apparently a lighter colored species than *R. arcuatus* Pocock of the ad-

joining State of Guerrero, with body more slender and keels not overlapping as in latter species. Different also in details of male gonopods.

Rhysodesmus knighti, new species.

Dusky brown, with keels and a connecting stripe across caudal border yellow. Legs and antennae yellow, the latter somewhat darker distally.

Anterior margin of collum with its lateral margins forming a somewhat semicircular, even line a little flattened at middle. Posterior margin subarcuate. Surface subdensely covered throughout with small, low, not usually sharply defined, granules.

Body of moderate relative width. Keels of anterior region overlapping, continuing evenly the convexity of the dorsum. Elsewhere the keels become somewhat more elevated and do not overlap. On typical segments of the middle region, the keels have the anterior corner widely rounded with margin evenly continuous with the moderately convex lateral margin; caudal corner subrectangular, narrowly rounded, not produced; caudal margin moderately convex. Metazonites wider across caudal border than across the anterior. In the posterior region the keels become moderately produced as usual. Surface of metazonites with numerous small, low, and in part obscure granules like those of collum, these in part longitudinally elongate.

Sternites wide; caudal margin widely concave, ending on each side in an acute process or tooth.

Gonopods of male as shown in Fig. 5.

Length of male holotype, about 20 mm.; width, 4.5 mm.

Locality.—Mexico: State of Nuevo Leon: Villa Santiago (Hacienda Vista Hermosa, Horsetail Falls.) Altitude, 1500 ft. Mesic temperate forest. One male taken on ground by Hoogstraal and Knight on June 16, 1940.

This species is similar to *R. pusillus* in size but is readily distinguished from that species in color, form of collum and keels, as well as in the gonopods.

Rhysodesmus leonensis, new species.

Prozonites and metazonites above black. Keels yellow with a continuous band of the same color across caudal border of metazonites. Cauda yellow. Collum yellow across anterior and posterior border. Antennae yellow proximally, brown distally. Legs yellow.

Collum of characteristic form, the anterior margin being straight except at ends, which bend back to join curve of widely rounded ends; posterior margin convex, the line mesally somewhat flattened. Dorsal surface coriariouly marked but with no obvious tubercles.

Keels of usual general outline; the posterior border extending caudad of the caudal margin of median portion of metazonite. Dorsal surface nearly smooth; with a few small, obscure tubercles on each side. Metazonites broader across caudal borders than across anterior.

Caudal margin of sternites weakly incurved.

Legs with joints of usual proportions as in *eusculptus*, etc. Spine of second article of moderate length.

Gonopods of male as shown in Fig. 6.

Length of male holotype, about 37 mm.; width, 8 mm.

Locality.—Mexico: State of Nuevo Leon: Sabinas Hidalgo, Ojo de Agua.

One male taken by K. Knight, June 14, 1940, under rocks on escarpment. Elevation 1500 feet. "Arid semi-desert scrub."

A more slender form than *R. brachus*, differing also in being banded in light across the metazonites.

EXPLANATION OF FIGURES.

Fig. 1. *Pararachistes nuevus*, new species. Processes of coxae of second and third legs of male.

Fig. 2. *Pararachistes nuevus*, new species. Right gonopod of male, anterior view.

Fig. 3. *Rhysodesmus brachus*, new species. Right gonopod of male, mesal view.

Fig. 4. *Rhysodesmus eusculptus*, new species. Right gonopod of male, mesal view.

Fig. 5. *Rhysodesmus knighti*, new species. Left gonopod of male, mesal view.

Fig. 6. *Rhysodesmus leonensis*, new species. Right gonopod of male, mesal view,

